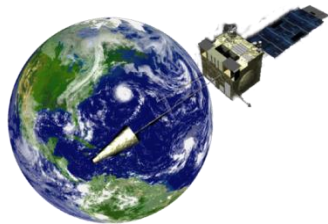


Collaboration Opportunities for the Application of Earth Observations from Space in Water Activities



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- Twofold Purpose of U.S. Foreign Assistance
 - Advances U.S. foreign policy interests
 - Compassion and support of human dignity
- Reflected in U.S. Strategic Documents
 - 2010 National Security Strategy - “...our long-term security and prosperity depends on our steady support for universal values...by speaking out for universal rights, supporting fragile democracies and civil society, and supporting the dignity that comes with development.”
 - 2008 U.S. National Defense Strategy – identified competition for scarce resources as key security challenges facing the U.S.
- Committed to Promoting Human Dignity Through:
 - Meeting basic needs: clean water, food, and medicine
 - Leading efforts to address humanitarian crises





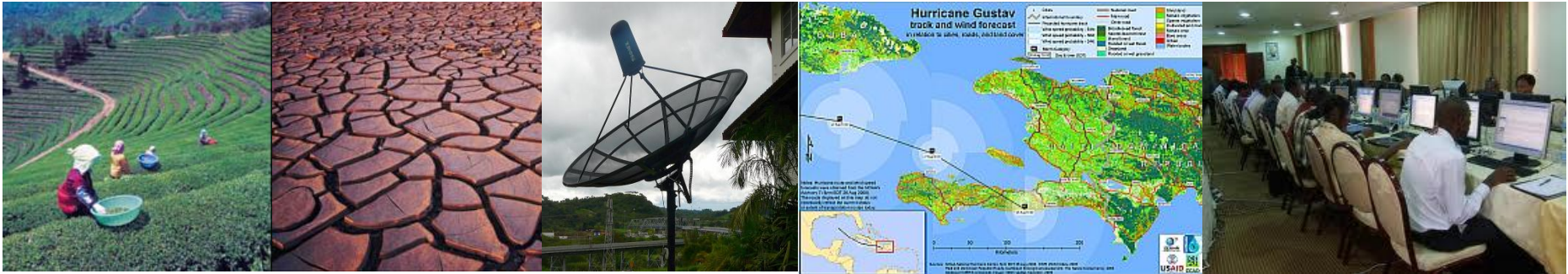
NOAA
SATELLITE AND
INFORMATION SERVICE

USG Support of Development Assistance through Earth Observations from Space

- 2010 National Space Policy
 - “The United States hereby renews its pledge of cooperation in the belief that with strengthened international collaboration and reinvigorated U.S. leadership, all nations and peoples—space-faring and space-benefiting—will find their horizons broadened, their knowledge enhanced, and their lives greatly improved.”
- United States Group on Earth Observations
 - For...battling drought and disease, emergency managers making evacuation decisions, farmers making planting choices...there is a real global need...to provide new analytical tools, access to timely data and forecasts about emerging threats that will enable wise choices in an uncertain world.
 - The aim is to provide the right information, in the right format, to the right people, at the right time, to make the right decisions.



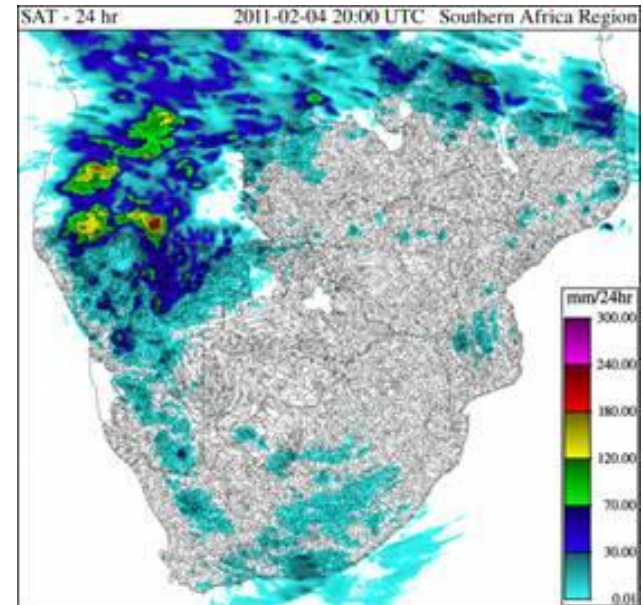
- Meeting the development needs through improving:
 - Access to Earth Observation Data
 - Data Dissemination Infrastructure
 - Number and Scope of Specialized Products
 - Knowledge of How to Interpret and Assimilate Data/Products into Decision Making Processes



- Precipitation—short term (flooding) and long-term (water resources)
- Snow and ice cover and snow water content
- Vegetation Health—an indirect measure of water surplus / deficit
- Soil moisture / surface wetness—the water content of the topmost 1 cm or so of soil

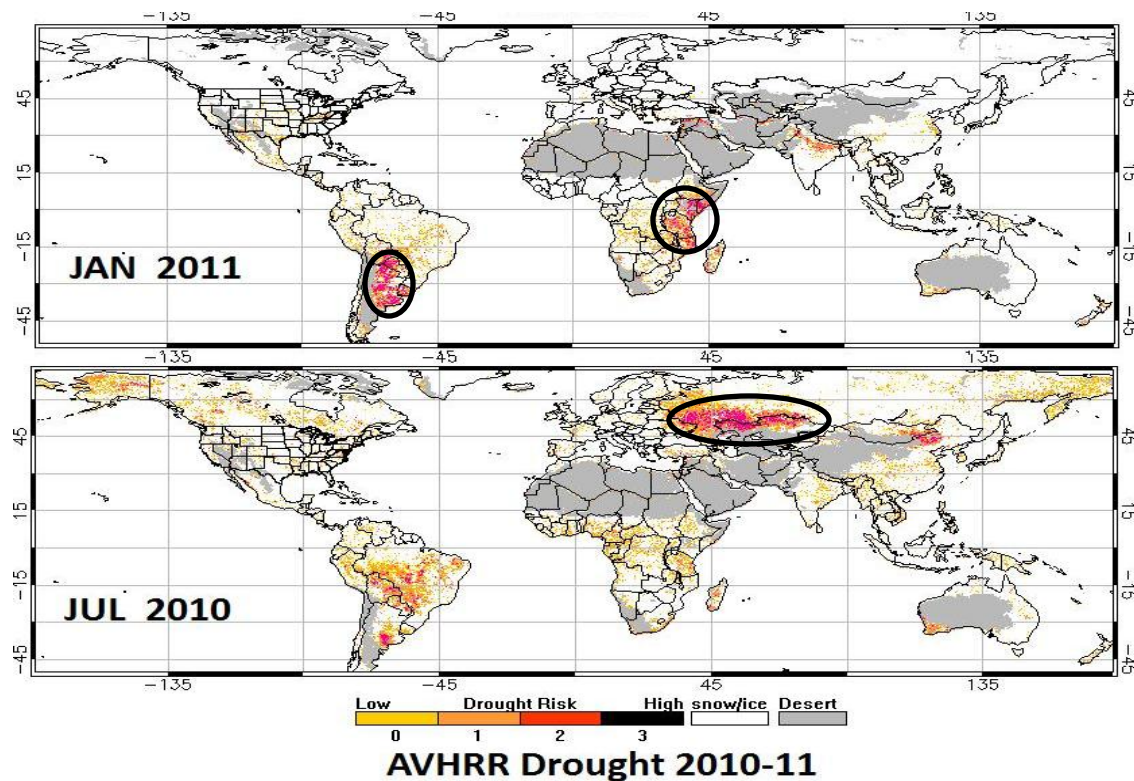
Flash Flood Guidance System

- NOAA provides satellite rainfall estimates for a Hydrologic Research Center -developed forecasting tool used by in-country weather services to identify regions of flash flood risk
- Namibia Example:
 - February/March 2011—heaviest rainfall in many areas in >120 years of records
 - Satellite rainfall estimates used extensively in Namibia Hydrological Service (NHS) bulletins



Namibia 24-h rainfall from the Hydro-Estimator from 2 February 2011.

- NOAA uses satellite data to monitor the health of vegetation (greenness and temperature) every week for the entire globe, providing an indication of the coverage and severity of drought conditions.
- This example shows recent severe droughts in Russia, East Africa, and Argentina.



In order to fully exploit the potential that Earth observation from space data have for development assistance, it is essential that we increase collaboration and partnerships between USG and international finance institutions like the World Bank.

Thank you!

